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IN THE
SUPREME COURT OF THE UNITED STATES
October Term 1972
No. 30 Original

STATE OF MICHIGAN,

Plaintiff,

—vs—

STATE OF OHIO,

Defendant.

BRIEF FOR PLAINTIFF IN SUPPORT OF EXCEPTIONS TO REPORT AND RECOMMENDATIONS OF SPECIAL MASTER TAKEN BY THE PLAINTIFF AND DEFENDANT

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Statement of the case

The present controversy involves the location of that portion of the boundary line between the States of Ohio and Michigan which runs from Post 71, a monumented position on the shore of Maumee Bay, through the waters of Lake Erie eastward to a point which was the location of the most northerly cape of Maumee Bay in 1836 and from that point on the cape, which has long since eroded to the north, to the terminus of the boundary between the Dominion of Canada and the United States. The erosion of the north cape of Maumee Bay makes the precise position which that point occupied in 1836 an essential part of this controversy. (M.R. 31)

The boundary between these states was established by the Congress by the Act of June 15, 1836, 5 Stat. 49, 50 (M.R. 27), which provided for the admission of the State of Michigan into the Union. That Act provided "That the northern boundary line of the State of Ohio shall be established at, and shall be a direct line drawn from the southern extremity of Lake Michigan, to the most northerly cape of the Maumee (Miami) Bay, after that line, so drawn, shall intersect the eastern boundary line of the State of Indiana; and from the said north cape of the said bay, northeast to the boundary line between the United States and the province of Upper Canada, in Lake Erie; and thence, with the said mentioned line, to its intersection with the western line of the State of Pennsylvania." The People of the State of Michigan, through the vote of a convention of elected delegates on December 15, 1836, assented to the foregoing boundary line (M.R. 17).

The two states do not agree upon the meaning and application of the words "a direct line drawn from the southern extremity of Lake Michigan to the most northerly cape of the Maumee (Miami) Bay, after that line, so drawn, shall intersect the eastern boundary line of the State of Indiana; and from the said north cape of the said bay, northeast to the boundary line between the United States and the province of Upper Canada, in Lake Erie;". Congress passed an Act eight days after they had accepted, ratified and confirmed the Constitution and State Government of the State of Michigan and declared Michigan to be one of the United States of America. That subsequent Act of June 23, 1836 provided: "That the northern boundary of the State of Ohio shall be established by, and extend to, a direct line running from the southern extremity of Lake Michigan to the most northerly cape of the Miami bay; thence, northeast, to the northern boundary line of the United States; thence with said line, to the Pennsylvania line." 5 Stat 56-57.

It is the contention of Michigan that the statute does not call for an angle in the boundary line at the north cape and that "northeast" as there used means in the same northeasterly direction as the land line, that is, a continuation or extension of the land line on a course having the same bearing as that line. Ohio, on the other hand, contends that the statutory language indicates that the boundary takes a new course at the north cape and that the bearing of that course, defined as "northeast", must, in the absence of qualifying language, be taken to be due northeast, that is, North 45° East.

Within this controversy there is no dispute as to the location of the land boundary, it having been settled since 1915. Both states by a joint commission, established and monumented the boundary between them from the westernmost part of the northern boundary of Ohio to the easternmost terminus. The eastern terminus of this boundary was set at Post 71 near the west shore of Maumee Bay approximately two miles westerly from the North Cape (TR 69-74). The land boundary zig zags from west to east and does not adhere to the boundary line as described in the statute. However, it is a practical line. The location of the northern cape of Maumee Bay is material because it is provided that the boundary line should run from it to the international boundary line. (M.R. 32) (TR 69-70)

The State of Michigan contends that Captain Andrew Talcott, in his survey authorized by Congress and the Executive in 1832, gave precise geographic data to locate the north cape (TR 45). Utilizing those figures and the newer found figures about the size of the earth, the 1836 position of the north cape can be accurately determined (TR 46). The boundary would then be drawn from Post 71 to this redetermined position of the north cape of Maumee Bay as it

existed in 1836, thence to the international boundary as previously contended for by Michigan.

The State of Ohio contends that the position of the north cape is found by the intersection of a line drawn S 44° 52′ 53.″6 W from the concrete wall on Turtle Island with a line drawn with the bearing of N 87° 49′ 44″ through Post 71 extended into Maumee Bay, thence N 45° to the international boundary (M.R. 29).

Argument

1. Directing the Court's attention to Michigan Exceptions to the Report and Recommendations of the Special Master as marked therein I, II, and III:

(A) Has the State of Michigan proved a superior method for relocation of the northerly cape of Maumee Bay as it existed in 1836?

(B) Has the State of Michigan proved that the only line which conforms to the Statute (Act of June 15, 1836) is a line drawn from the north cape of Maumee Bay to the international boundary line and is a straight line from the southern extreme of Lake Michigan through the north cape of Maumee Bay to the International Boundary between the Dominion of Canada and the United States of America.

2. Did the Special Master err when he concluded that Turtle Island must be a monument over which the northern boundary of Ohio must pass as it proceeds northeasterly to the International Boundary?

1. (A) Has the State of Michigan proved a superior method to relocate the north cape of Maumee Bay as it existed in 1836?

Michigan answers this question, YES

Witness Berry testified directly giving the reason for finding the North Cape as it existed in 1836 (TR 73-75) and further the method by which to locate it. Ralph M. Berry was qualified as a surveyor and an expert of geodetic engineering both as to education and experience, and to practice. (TR 19-27, 39-46, 131, 135 et seq, 139 et seq.) The expertise goes well into all phases of the witness' testimony and no objections were raised about the qualifications of the witness on any point.

Witness Berry knew the documents surrounding the legislation of 1836. From these documents he concluded that the survey by Captain Andrew Talcott afforded the best method to relocate the north Cape of the Maumee Bay. (TR 45 et seq 50). Further, by tracing the history of Turtle Island, and the figure and base of the island, Witness Berry computed a geodetic latitude and longitude for the 1835 position of the North Cape. (TR 54 et seq) Witness Berry's computation of the 1835 position of the North Cape of Maumee Bay is:

Latitude (North): 41° 44′ 02″004

Longitude (West): 83° 24′ 56″923

The specific reason for this identification is a physical feature of Maumee Bay in 1835. At that time, its location was both a physical fact and a mathematical location. Nothing in the record shows that any part of the North Cape had eroded between 1835 and 1836.

This methodology is based very closely to the original thinking expressed by Congress in 1836 (contained in 5 Stat 49-50). The Congress in that act gave two physical features that it wanted incorporated in the boundary, the

southern extremity of Lake Michigan and the North Cape of Maumee Bay.

From the time of the Ohio Constitutional Convention of 1802, the whole contest was to control Maumee Bay. Prior to 1802 and until Captain Andrew Talcott performed his services for the Congress, relatively little was known of the tract of land known as the northwest part of the United States. The maps of the times from 1750 to 1802 illustrate this concept. (See Mich Exhibit 7, Senate Document 211, pages 12 et seq, Congressional Set Series 281) The debates in Congress and the surveys required by Congress illustrate the concept from 1802 to 1832.

After the Ohio Constitutional Convention there was much agitation for the settlement of the northern boundary of Ohio. This began with discussions in Congress in 1803 about the acceptance of the Ohio Constitution and execution of the laws of the United States. Congress did not decide the extent of the northerly jurisdiction of Ohio at that time. Finally, in 1805 Congress enacted territorial legislation for the country north of a stated east-west line of the State of Ohio. At this time, a conflict would have been apparent if the Congress had known that it did not coincide with the proviso in the Ohio Constitution of 1802. (M.R. 25-26) Mich. Exhibit 8.

Between 1810 to 1820, two separate surveys, the Harris and the Fulton, were made (Exhibits 13, 14, 15) to determine what Congress meant by the acceptance of the Ohio Constitution and the Act to Enable The Territory Of Michigan To Be Formed. For many reasons Congress rejected the approval of these surveys. In 1828, a Congressional Committee declared what was needed to settle the boundary issue was a survey done by a competent engineer with competent aids. By means of the Act of July 14, 1832 Congress

gave the approval for this survey. By executive order Captain Andrew Talcott was engaged to locate the northerly cape of Maumee Bay and the southern extreme of Lake Michigan.

The Special Master determined that the 1836 North Cape of the Maumee Bay can be relocated with precision. However, he erred when he did not include in the definition of the boundary between the two states a line which closes the 1836 position of the North Cape of Maumee with Post 71 on the western shore of Lake Erie. Post 71 is a cement monument laid on the ground to mark the spot where commissioners from each state determined where the land boundary ended. The evidence is that Post 71 is 3 to 4 kilometers from the location of 1836 position of the North Cape of Maumee Bay. (TR 73 et seq, 69)

Clearly, neither Ohio nor Michigan nor the Special Master recommend that Post 71 is the point from which the direct line should be drawn to the International Boundary. Michigan urges the adoption of the Talcott survey. Ohio and the Special Master contend that the line drawn from Post 70 through Post 71 would intersect a line drawn S 44° 52′ 53.″6 W from Turtle Island at the point which would be the 1836 position of the north cape. (M.R. 34-35) Obviously this represents a compromise on the part of each state, the subject matter of which has not been before Congress, let alone approved by it.

Arguendo, the Harris line followed by the commissioners was supposed to be a straight line, but, as resurveyed and found to be the boundary, it was not. To the extent that it was not a direct line and to the extent that the line drawn by Ohio and recommended by the Master does not form a tangent to the Southern extreme of Lake Michigan, a compromise has been reached by both the joint commissioner and

the State of Ohio and the Special Master. To further tangle the matter there is no authority to draw a line S 45° W from the center of a lighthouse on Turtle Island. In point, the fact established by the Special Master, the 1835 position of the north cape of Maumee Bay, is 3,177.3 yards in distance from the lighthouse on Turtle Island in the direction of S 44° 52′ 53.″6. (MR 15)

The State of Michigan relies heavily on its pleadings, the evidence, her Requested Findings of Fact, her letter to the Special Master and argument to prove that the Special Master was cognizant of the undefined gap between Post 71 and the 1836 location of the north cape of Maumee Bay. (Article IV, Complaint; TR 73-75, Mich Ex 30, map 9; Proposed Findings of Facts of the State of Michigan No. 44, page 2; Letter to Judge Maris dated March 18, 1971; TR 126-128) From all the foregoing, the State of Michigan cites as the practical and legal consequence of these facts the following surveying rule:

". . . And it is the universal rule that courses and distances must yield to actually existing monuments, *or to the site of their former location, if that has been clearly established. . . .*" (emphasis supplied) Clark on Surveying and Boundaries, Third Edition by John S. Grimes, Sec. 314, p. 342.

Quoted from the classic work of Justice Thomas M. Cooley is the following:

"When the witness-trees are gone, so that there is no longer record evidence of the monuments, it is remarkable how many there are who mistake altogether the duty that now devolves upon the surveyor. It is by no means uncommon that we find men, whose theoretical education is thought to make them experts who think that when the monuments

are gone, the only thing to be done is to place new monuments where the old ones should have been, and would have been if placed correctly. This is a serious mistake. The problem is now the same that it was before: To ascertain by the best lights of which the case admits, where the original lines were. . . ." The Judicial Functions of Surveyors. Justice Thomas M. Cooley. Delivered at the second meeting of the Michigan Association of Surveyors and Civil Engineers, Lansing, January 11-13, 1881.

Wherefore, the State of Michigan concludes that the Special Master erred in his selection of the 1836 position of the North Cape and that the State of Michigan put in adequate and substantial proof as to its existence and kept the matter timely before the Special Master.

1. (B) Has the State of Michigan proved that the only line which conforms to the statute (Act of June 15, 1836) is a line drawn from the North Cape of Maumee Bay to the International Boundary Line and is a straight line from the southern extreme of Lake Michigan through the North Cape of Maumee Bay to the International Boundary between the Dominion of Canada and the United States of America.

Michigan answers this question, YES!

The entire controversy must be understood historically. Various states had ceded land to the United States, said land to be known as the Northwest Territory. The vast extent of this territory was not known. The people on the eastern shores were confronted with the revolution. The visionaries among them knew this northwest territory must be governed. The Congress, therefore, set about this government of the territory. It passed the Northwest Ordinance in 1787. (MR 5)

To set the bounds of local governments within this territory, the available maps were used. These maps were inaccurate, as events turned out, but the extent of the inaccuracy did not reveal itself fully until long after the Ohio Constitutional Convention of 1802. Congress in 1802 set the same northern boundary for Ohio as was proposed in the Northwest Ordinance.

The people who gathered at the Ohio Constitutional Convention heard that the longitude of the southern extreme of Lake Michigan was southerly of the mouth of the Maumee Bay at Lake Erie. Thus, to protect themselves from the loss of this important transportation point, (Mich. Exhibit 7, p. 9, 15, 16; Mich. Exhibit 8, p. 6, 17) they included in the Constitution of Ohio of 1802 the following language:

"Provided always, and it is hereby fully understood and declared by this convention, that if the southerly band or extreme of Lake Michigan should extend so far south that a line drawn due east from it should not intersect Lake Erie, or if it should intersect said Lake Erie east of the mouth of the Miami River of the Lake, then and in that case, and with the assent of the Congress of the United States, then the northern boundary of this state shall be established by and extended to, a direct line running from the southern extreme of Lake Michigan to the most northerly cape of the Miami Bay, after intersecting the due north line from the mouth of the Great Miami as aforesaid; [The western boundary of the new State] thence northeast to the said territorial line, to the Pennsylvania line." (MR 9)

Elsewhere in this brief, it has already been shown that uncertainty of the northern boundary of Ohio existed from the time of this proviso. Surveyors Harris and Fulton ran two separate surveys, but no survey really determined all the matters needed to fix the line until the Congress, with

full recognition of the inadequacies it had had when the boundaries were first called, passed the Act of June 15, 1836. Immediately preceding the introduction of this bill, which became Act of June 15, 1836, the survey of Captain Andrew Talcott was transmitted to Congress. (TR 43 et seq, Mich. Exhibit 6, p. 34 & 35 of Senate Journal; p. 42 & 43 of House Journal.)

The first analysis of that statute must concern itself with the word "northeast". The word first appears in the Ohio Constitution, and then the statute of June 15, 1836. Certainly in 1802 there was no reason to intend a change in bearing at the northerly cape of the Maumee Bay. The land transportation point had been protected. If anything, this term was inserted to make it known that a change in bearing was not contemplated in the previous statute, Ohio Enabling Act. Previously the line had gone due east from the southerly extreme of Lake Michigan to Lake Erie. If there were no directions to be followed from the northerly cape, the normal way to go would be that the line would then be a line from the northerly cape due east from the Maumee Bay to the boundary between the United States and Canada. (Mich Exhibit 8, p. 18)

Beyond the particular meaning of the word 'northeast' are there any signs as to whether a bearing is intended? Certainly the idea that the master concluded that northeast must be N 45° E because this line would bisect Turtle Island must be disregarded. Ample evidence is in the record in this case, and also was before Congress, so that if Congress decided to change the meaning of the Ohio's proviso it would have expressly stated that the line would be a line from the northerly cape of Maumee Bay through Turtle Island to the boundary between the United States and Canada. No evidence in the record would acknowledge that the mouth of the Maumee Bay must be protected by a line

through Turtle Island. (Mich Exhibit 7, pp. 1-17; Mich Exhibit 8, pp. 15-17)

It is equally as evident that if the statute had defined the line as running in a northeasterly direction through the existing lighthouse on Turtle Island, then there would be force in the Special Master's Recommended Decree. The fact of the matter is that Turtle Island is a witness to the north cape and that was certainly a fact before Congress because Captain Andrew Talcott used Turtle Island as an accessory to locate the north cape. The insertion of Turtle Island as a call in the description of the boundary is judicial legislation and is irrelevant to the meaning of 'northeast'. It should be noted that Congress directed that only the location of the north cape of the Maumee Bay be found and to have the observations returned to the proper department. (Mich Exhibit 8, pp. 15-17)

The Special Master desires to give precision to effectuate the Congressional purpose. The Congressional purpose in the Acts of 1836 could not have intended to grant to Ohio any more territory than that state already claimed. (Mich Exhibit 7, pp. 14-15) This was the report of the Committee of the Judiciary while considering a resolution about Ohio's legal rights and was in addition to the bill to settle the boundary and admit Michigan to the Union. The entire purpose of this legislation regarding the northern boundary of Ohio was to give jurisdiction over Maumee Bay to Ohio. (Mich Exhibit 8, p. 17) The term 'northeast' is similar to 'northwesterly' as described in a statute of the State of Washington and 'northerly' in description in conveyances and memoranda of decision in the same state. *Groeneveld* v. *Camano Blue Point Oyster Co.*, 81 P2d 826, 829. *Fosburgh* v. *Sando*, 166 P2d 850, 851. *Bonded Adjustment Co.* v. *Edmunds*, 182 P2d 17,17. The Supreme Court of Wash-

ington says that the terms 'northerly' and 'northwesterly' are general terms.

The concept of northeast being a general adjective will not be a newly advanced theory to the court in its review of the recommendations by the Special Master. On page 14, Reply to Commentary upon the Proposed Finding of the State of Ohio, Brief and Argument in ~~Support of~~ Proposed Findings of Fact of the State of Ohio, Proposed Findings of Fact and Conclusions of Law of the State of Ohio, the State of Michigan informed the Special Master that the American Dictionary of English Language, Vol. II, (1828) defines northeast: "Nother'ast, a. Pertaining to the northeast, or proceeding from that point; as a northeast wind." Therefore, as a general proposition the term northeast should mean a northeast line as the precise direction was not known when the problem was first anticipated in 1802 and from which Congress made no substantial changes. Section 2, Ohio Constitution, 1802, Acts of June 15, 1836 and June 23, 1836. It is most conceivable that the conventioneers were trying to protect themselves from an error of about twelve miles, over the course of a distance of an unknown quantity of miles. It was because Congress assented to the provision offered by Ohio that no terms were changed. Exhibit 7, Sen. Doc. 211, p. 13.

At the argument on April 1, 1971 in the informal discussion on page 145, Mr. Berry brings out that there is no necessity for the boundary line to bisect Turtle Island because Turtle Island is not a monument in any description of the boundary given by Congress. The Special Master adverted to the fact that it was a convenient fixed monument. To the extent that it becomes a monument through which a line must pass to define the meaning of the term 'northeast' as such term appears in the call in the statutes,

Michigan responds that this is irrelevant. Turtle Island happens to be close to a bearing of North 45° East from the North Cape and therefore the term 'northeast' must mean North 45° East. If the Congress had intended this, there was ample opportunity to insert this provision in the call and it would have either inserted North 45° East or mentioned Turtle Island.

Lastly, if the Congress had intended to change the bearing there was ample time in which to discuss it. Beginning with the statute to enforce the federal law in the State of Ohio (1803) down to 1836 there was no mention of a change in direction at the north cape. Particularly in the Strong report in 1828, Mich. Exh. 1, the Congress wanted to know precisely the position for the southern extreme of Lake Michigan and the location of the North Cape. Had they wanted at that time to include Turtle Island as a monument through which the line might pass, it would have been mentioned. Turtle Island becomes relevant only as a reference point to locate the north cape. It became convenient for a later surveyor marking the depth of the water and configuration of the shoreline to show it as the boundary line. He had, however, no congressional sanction. (TR p. 134)

Later, contemporaneous maps have mischieviously crept in to interpret the statute. The first map is in 1844 by Captain Williams. The Special Master had before him the testimony of Professor Berry regarding the conclusions reached by Captain Williams. The testimony related that Captain Williams' job was to assemble information concerning the configuration of the shoreline, the depth of the water in Maumee Bay for the purpose of studying needs for engineering works and guidance for navigation. The field books of Captain Williams' 1844 study show no notation of any boundary marks recoverable by him. There

is no evidence that he had authority from Congress or any superior to establish this line or that he had any competence to determine what Congress had said the boundary was to be. TR 134 and 135.

The informal discussion before the Special Master indicated that the only purpose for which the map could be used was that it showed a line in 1844 marked N 45° E from the north cape through Turtle Island. The line marked N 45° E is not the same as called for by the statute and as referred to by Witness Berry. The statute calls for 'northeast'. It does not say in so many words 'North 45° East' as depicted on the exhibit.

At the argument before the Master the matter of Captain Williams map was brought up, and the Special Master indicated the purpose of the map was limited to show where a line north 45° east would run. As a matter of competence to show the legislative purpose of the term northeast it was ruled that the line was not binding on anyone. The title of the line should not be rendered binding in this case.

The Special Master determined a congressional purpose in the use of the term "northeast". Granted the dictionary definition of northeast meant midway between north and east, but the dictionary was published just slightly before the enactment of the statute. The general usage of the term beyond that was not evidenced. However, to bolster this definition, as to the Congressional purpose, an after the fact map was invoked.

The State of Michigan has excepted to Finding No. 38, page 18, in the Special Master's Report. This Finding relates to the Williams survey of 1844. The Williams survey is in evidence as Ohio Exhibits Nos. 1, 2 and 3 and although that survey does not show a boundary line between Ohio

and Michigan as beginning a course of North 45° East at the point described on the map as north cape, it is not complete. The boundary line shown on the map following that course from the north cape bisects Turtle Island, and is shown as either passing through the lighthouse on this Island or very near to it. It does not go west of the north cape.

The State of Michigan further assigns as error the failure of the Special Master to find the requested Findings of Fact of the State of Michigan Nos. 45, 47, 48 and 49.

Failure to grant Michigan's requested Findings of Fact Nos. 47, 48 and 49 must have been on the basis that there was no evidence or that there was no relevancy. MR 25. The relevancy of Nos. 45, 47 and 48 go to support the conclusion which Michigan has well pleaded. Complaint Article V and VI, Exhibits 18, 10, and page 132 of the transcript, are evidence sustaining this position. The transcript of Witness Berry's testimony beginning at page 57.

> "Starting with the computed latitude and longitude of the 1835 position of the North Cape, derived as previously described, a line in azimuth 268° 58′ 55.2″ is computed to intersect the International Boundary Line between Turning Points 159 and 160 at:
>
> latitude (North): 41° 41′ 25″.220
>
> longitude (West): 82° 48′ 43″.659
>
> Which position is:
>
> 50,227.42 meters from the North Cape
>
> 13,096.45 meters from Turning Point 159
>
> 25,371.15 meters from Turning Point 160

Above intersection and lengths are computed on the North American Datum of 1927."

"Captain Talcott used an accurate instrument and made multiple observations on numerous stars and finally made a careful mathematical analysis of his results before he concluded that '. . . the latitudes of the several points are true to the nearest second.' With these observations at hand, he calculated 'The arc joining the South bend of Lake Michigan, with the North Cape of the Maumee Bay' and found its azimuth at the South bend of Lake Michigan to be 266° 24′ 32″.6, whereas it was 262° 58′ 55″.2 at the North Cape. Although there is no information available to identify the figure (size and shape) of the earth adopted by Captain Talcott, a rough computation checks this change of azimuth within approximately one minute of angle. It is concluded, therefore, that Captain Talcott's survey provides a superior means of retracement of the 1835 position of the North Cape, and a positive indication of the intent of Congress when the act of 15 June 1836 was passed because it was before the Congress as a result of the directives of the act of 14 July 1832, pursuant to which Captain Talcott made his survey."

Ohio, in her reply to the Michigan Exceptions and Recommendations, disputes Witness Berry. Nowhere in the evidence does Ohio challenge any statement made by Witness Berry. To the extent that Ohio believes these were conclusions drawn by Witness Berry, Michigan says that Berry was on the stand and Ohio did not subject him to test cross examination. Further, there were no objections as the testimony went into evidence. These were opinions supported by a foundation in evidence and were within the expertise of the witness, Professor Berry.

2. Did the Special Master err when he concluded that Turtle Island must be a monument over which the northern boundary of Ohio must pass as it proceeds north easterly to the International Boundary?

Michigan answers YES.

Michigan submits that the Special Master begins his error in Recommended Decree, paragraph 2:

> **"2. In 1836 the north cape of Maumee Bay was located at the point in that bay where a line drawn north 87° 49′ 44″ East from Post 71 on the land boundary line between the States of Ohio and Michigan intersects a line drawn South 45° West from the center of the existing circular concrete seawall on Turtle Island, both bearings being measured from a true meridian."**

and by failing to grant Michigan's requested Findings of Fact Nos. 40, 41, 43 and 44.

The Special Master erred in the Recommended Decree, paragraph two when he recommended that the North Cape of the Maumee Bay in 1836 was located at a point in the bay where a line drawn N 87° 49′ 44″ E from Post 71 on the land boundary line between the States of Ohio and Michigan as such line intersects a line drawn S 45° W from the center of the existing circular concrete seawall on Turtle Island. No supporting testimony or exhibits were offered by Ohio dealing with an original coherent survey to support this determination or to rebut Michigan's submissions for the solution to the problem. It is a well established legal principle that in order to conduct a retracement to find a lost or missing monument in a call, a surveyor must use the best evidence available.

The State of Michigan, having taken issue with paragraph two in the Special Master's Recommended Decree goes further to add that the Special Master's error was compounded by failure to grant Findings requested by the State of Michigan. The only solid evidence to recapture the position of the north cape of Maumee Bay as it existed in 1836, since washed away, consists of the data supplied by Captain Andrew Talcott and interpreted by the Michigan Witness Berry.

The geodetic determination of Turtle Island by the United States Corps of Engineers, Lake Survey District in the year 1961 provided the beginning. Witness Berry thoroughly examined the locus, Turtle Island and government records thereto, and concluded that the present ruin occupies essentially the same site as the original lighthouse. (Tr 50-51) Thus, the beginning point having been established, the geodetic latitude and longitude was computed for the 1835 position of the North Cape. (Tr 54) Captain Talcott did not identify the figure of the earth, but the testimony indicates that from the Southern extremity of Lake Michigan to the computed position of the North Cape the change of azimuth would be approximately one minute of angle. The expert testimony of Witness Berry, based on facts in evidence at the hearing concluded that Captain Talcott's survey provides a superior means of retracement of the 1835 position of the north cape.

Witness Berry, as a surveyor, and as a part time consultant to United States Lake Survey, testified that pursuant to a 1961 determination by the United States Lake Survey District, a geodetic determination was made of the latitude and longitude of the presently existing lighthouse structure on Turtle Island. By examination of the records and procedures used by this group, Witness Berry concluded that this was a position of adequate accuracy which

could be used as a base for computing the latitude and longitude of the 1835 position of the North Cape of Maumee Bay. In the informal discussions with the Special Master in Philadelphia, April 1, 1971 this conclusion was urged.

In a revised draft of a report of the Special Master, March 12, 1972, Finding No. 40 was included. It conflicts with the ultimate finding made by the Special Master to relocate the North Cape of Maumee Bay. The fact of the matter is that the evidence points directly to the conclusion of Requested Finding No. 40 which request was for a physical fact that has been reduced to a known geodetic computation which, knowing the place of beginning, the angle from which to start, and the distance to draw the line, this finding should have been granted to locate the north cape. It matters not that it comes into the water. The one selected by the Master goes into the water also. The procedures are different, and Michigan uses accurate measurements to relocate the 1836 position of the North Cape of Maumee Bay and the Special Master does not.

Certainly in order to relocate corners of a survey the doctrine of reversing the course is perfectly proper. However, in order to recover the point, that point must first appear in the survey from which the point is relocated. To run the line back S 45° W from Turtle Island does not recover any point on the Harris survey. The principle of *Simmons Creek Coal Company* v. *Doran*, 142 US 417 and *Ayers* v. *Watson*, 137 US 384 is inapplicable. This principle is applicable only in the event you refer to Captain Talcott and his survey with ample field notes to draw a map to indicate Turtle Island, the direction and distance to the northerly cape of the Maumee Bay, as it was a reference to the northerly cape as directed by Congress.

When Ohio utilizes this concept of reversing the course

of the survey, as does the Special Master, they assume that Harris included Turtle Island and that Turtle Island was part of a call known by Congress in 1836 in adopting the term northeast. Both Ohio and the Special Master have assumed that Turtle Island was within the Harris survey. The location of the point of the Northerly Cape of the Maumee Bay was not established when both the Special Master and Ohio interjected the Turtle Island monument in the call. At the most, Turtle Island is a mere accessory to locate the Northerly Cape of Maumee Bay as witnessed by Captain Talcott. Nevertheless, to buttress their argument that "northeast" means N 45° E they in turn rely on the fact that in running S 45° W from the Turtle Island, they recover the North Cape of Maumee Bay. Thus the use of this principle of reversing directions is not relevant to this case.

Having determined the location of the North Cape of Maumee Bay, it becomes necessary to reconsider the construction of the term "thence northeast" as it is found in the Act of June 15, 1836. The record in this case contains nothing positive to show that Congress intended to have the line pass over Turtle Island. The relevance of Turtle Island at the time Congress passed the statute is for the location of the North Cape of Maumee Bay. It is only fortuitous that a line N 45° E from the north cape passes over Turtle Island. Captain Williams discovered this occurence, but this court should not dignify it by making it the law of this case.

SUMMARY OF ARGUMENTS

The northerly cape of the Maumee Bay as it existed in 1836 and computed for the year 1927 is:

Latitude (North): 41° 44′ 02″.004

Longitude (West): 88° 24′ 56″.923

The basis for this rests with the only solid evidence taken at the hearings. Captain Andrew Talcott precisely figured the location of this position in 1835 and Ralph M. Berry computed the position according to North American Datum of 1927.

Any other determination of this position errs because of known errors in the surveys or in the result of a compromise between the states.

Turtle Island, wherever it lies in relation to the North Cape of the Maumee Bay as it existed in 1835 was not a call in the statute of June 15, 1836 nor is it a proper call today. The relevance of Turtle Island in this case is to locate the point of the north cape of Maumee Bay as it existed in 1836.

The State of Michigan has proved by a preponderance of the evidence that the northern boundary is a line which begins at the southerly extreme of Lake Michigan as it existed in 1836 to the northerly cape of Maumee Bay and extended to the line between the United States and Canada. The historic evidence adduced by the State of Michigan overwhelms any conclusion to be drawn by contemporaneous surveyors whose authority to interpret the line is questionable.

Alternatively to the strict interpretation of the statute as requested by Michigan, the Court may decide that an equitable division of the waters of Lake Erie was uppermost in the minds of Congress in 1836. In private matters a way to do this would be to determine the area of Lake Erie around a relevant coastline on Lake Erie. Beginning at a point on the location of the Maumee Bay as it existed in 1836, then direct a line to the boundary between the United States and Canada so that such line would equally divide the water.

PRAYER

The State of Michigan seeks to have this Court review the record in this case made, reverse the judgment of the Special Master and assert that the boundary line between the States of Michigan and Ohio is an arc drawn from Post 71 to the northerly cape of Maumee Bay, located at

Latitude (North): 41° 44′ 02″.004

Longitude (West): 83° 24′ 56″.923

and thence extending on an azimuth 268° 58′ 55.2″ to intersect the International Boundary Line between Turning Points 159 and 160 at

Latitude (North): 40° 41′ 25″.220

Longitude (West): 82° 48′ 43″.659

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